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RETAIL CREDIT AND THE PATRON FINANCE PROGRAM
IN KANSAS COOPERATIVES

by

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INTRODUCTION

The past ten to fifteen years have witnessed dramatic changes in the character of the average farm business. The farmer operates more acres with the aid of a larger capital investment. He utilizes an array of new farming methods, machines, and production aids, all of which have combined to revolutionize the character of agricultural production. These new technologies invariably take the form of purchased inputs; resources purchased off the farm to be used in production on the farm. The changes to larger operations using more purchased inputs have caused many farm operators to be in need of increased working capital which generally means more credit. Cooperative farm supply firms and their privately-owned counterparts have experienced increased demands for credit from their farmer-customers.

Merchant credit has existed almost as long as commerce itself. The establishment and enforcement of policies with regard to credit extension on open accounts have in the past and are at present among the most difficult problems to be faced by management of any enterprise which extends credit. These problems have been particularly thorny for cooperative managers and boards of directors. Many cooperative associations have experienced capital shortages, narrow margins between receipts and the cost of goods sold, and poor or inefficient management. Credit extension has often intensified the difficulties arising from the

other problems because members have been unwilling to pay promptly for the supplies they have received.

The most obvious solution to the problem would be to eliminate credit extension altogether. Such a solution takes no account of the competitive situation, and most students of the problem have concluded that a cash policy would not contribute to financial success of the cooperative. Whitehair stated, "Since accounts receivable are a result of sales, cooperative grain and supply firms aspiring to make a profit should maintain a higher percentage of assets employed in accounts receivable."¹ He then hastened to add that the maintenance of the receivables in a current condition is equally important. Phillips felt that the major contribution of credit extension was the increased sales volume it encourages.² He cautioned that, if not wisely administered, it is one of the quickest routes to bankruptcy for the farm supply business. The fact that the farm supply cooperative must extend credit is inescapable. It is incumbent upon them to manage this function wisely.

The Patron Finance Program is an arrangement between co-operatives and Production Credit Associations. It is formalized by the signing of a contract called a guaranty agreement by the two associations. Under the terms of this agreement, the

¹ Norman Vincent Whitehair, "Measuring Performance of Cooperative Grain and Supply Firms in Indiana" (unpublished Ph.D. dissertation, Purdue University), p. 171.

² Richard Phillips, Managing for Greater Returns (Des Moines: Garner Publishing Company, 1957), pp. 525-26.

cooperative agrees to meet the stock purchase requirement of all Production Credit Association borrowers. The cooperative also agrees to guarantee repayment of all loans made through the Program.

When the required agreements have been signed, the cooperative can offer the Program to its patrons. If the patron is willing to use the Program, a note is drawn for the amount of supplies the patron anticipates needing during the year. After the line of credit is approved by the Production Credit Association loan committee, the patron may charge his purchase at the cooperative. The cooperative is reimbursed by the Production Credit Association, and the amount of each sale is added to the patron's loan balance. The patron may repay his loan either at the cooperative or directly to the Production Credit Association. The purpose of the Patron Finance Program is to relieve the cooperative of a portion of its accounts receivable burden, and to make it possible for patrons to obtain supplies on credit.

PURPOSE AND OBJECTIVES OF THE STUDY

Credit extension, policies related thereto, and the impact of the credit function on cooperative businesses have long been areas of great interest to students of cooperative enterprise. Within these areas, some of the most difficult problems for cooperative managers and boards of directors are found.

The Production Credit Association - Co-op Patron Finance Program, hereafter referred to as the Patron Finance Program or

the Program, was proposed as a means of reducing the burden of accounts receivable on cooperatives and of extending needed credit on a sound basis to agricultural producers. The purpose in studying the program in Kansas is to examine the extent to which the Patron Finance Program has fulfilled its objectives where it has been used in the state. It was thought that by studying the problems of accounts receivable financing in Kansas Cooperatives, investigating some of the attitudes of patrons toward open accounts financing, and evaluating the performance of a proposed solution to the problem, some light could be shed on this area.

The study has five main objectives: (1) to show trends in accounts receivable financing in Kansas Cooperatives, (2) to study the policies regarding credit extension employed by cooperatives with the patron Finance Program, (3) to show some of the attitudes regarding accounts receivable credit held by patrons, (4) to determine the extent to which the Patron Finance Program has been used in Kansas cooperatives, and (5) to evaluate the effectiveness of the Patron Finance Program in reducing the burden of accounts receivable in the cooperatives using it.

REVIEW OF LITERATURE

Hesser, Doll, and Sullivan stated that 19% of all non-real estate agricultural credit was supplied to farmers by merchants and dealers. Using data from the 1960 sample survey of Agriculture, they estimated the total supplied by merchants and

dealers at slightly over one billion dollars. They also found this type of credit to be a relatively more important source for farmers with smaller operations.¹ Herder stated that retail feed dealers in Minnesota operated within an imperfect competitive framework and that credit extension was one means of competition. He doubted that elimination of the credit function would be reflected either in the prices of feed or in the firm's profit margins. Additionally, he found credit costs to be 1.4 cents for each dollar of accounts receivable for each month the firm extends credit.² Knudtson and Koller, in their study of credit extension by Minnesota farm supply cooperatives, found that the volume of receivables held by the 85 associations included had risen 58% in dollar volume from 1950 to 1953. The percentages of total assets and current assets in receivables had also risen significantly. They found that credit costs constituted about 8% of the total operation expense of the associations and amounted to almost 2% of credit sales.³ Eichers found that, while supply sales had increased 39% from 1953 to 1957, credit sales had increased 81% and accounts receivable 71% in the 30 Midwest

¹ L. F. Hesser, R. J. Doll, and G. F. Sullivan, Farm Debt as Related to Economic Class of Farm (Kansas City: Federal Reserve Bank of Kansas City, 1964).

² Richard Herder, "Use of Retail Credit by Retail Feed Firms in Minnesota" (unpublished Master's thesis, University of Minnesota, 1959).

³ A. C. Knudtson and E. F. Killer, Accounts Receivable Credit in Minnesota Farm Supply Cooperatives, Station Bulletin 430, Minnesota Agricultural Experiment Station (Minneapolis: Minnesota University Press, 1955).

cooperatives included in the study. He found credit costs of \$1.74 per \$100 of credit sales and \$1.34 for each \$100 of credit extended for each month. Ninety percent of the patrons used credit at some time during the year, but only 31% had outstanding accounts at the end of the year. The ten largest account holders in each association accounted for only 4% of the total sales but 28% of the accounts receivable.¹ Mather, in a paper presented at the 1959 session of the American Institute of Cooperation, stated that various Farmer Cooperative Service studies had shown that farm supply cooperatives over the nation had transacted from 55 to 70% of their total business on credit. The accounts receivable, outstanding less than thirty days as a percentage of the total, varied from 40 to 78%. Credit costs varied from \$1.21 to \$2.45 for each \$100 of credit sales and from \$13.30 to \$17.34 for each \$100 of average accounts receivable.²

Amos, in his study of 48 retail feed dealers in Kansas, determined that credit costs were \$5.31 for each \$100 of credit sales and \$19.38 for each \$100 of average accounts receivable with a turnover ratio of accounts of slightly over 100 days. He found significantly lower credit cost in firms doing a larger volume of credit business.³

¹ T. R. Eichers, Credit Control in Selected Retail Farm Cooperatives--Area IV, U. S. Department of Agriculture Farmer Cooperative Service, General Report 57 (Washington: U. S. Government Printing Office, 1959).

² J. W. Mather, "Findings From Our Credit Studies," American Cooperation (Washington: American Institute of Cooperation, 1959).

³ J. M. Amos, "Credit by Retail Feed Dealers" (Unpublished Master's thesis, Kansas State College, 1957).

Elmore (1956) stated that "there is no question but that credit is a great selling tool, and it is becoming more important everyday." He noted that since credit had become so important many feed dealers were extending excessive amounts of credit and for excessively long periods of time.¹

Diesslin (1955) made the following statement about agricultural equipment dealers: "Dealers have moved in the direction of more liberal financing arrangements on farm equipment which is also true of many other agricultural industries." He believed that some kind of credit was necessary as approximately one-half of the 1955 retail farm sales were made on credit.²

Bakken (1956) concluded from a study of retail management of feed dealers that

Retail feed merchants are absorbing unnecessary losses through accounts which run up the costs of doing business. Moreover it is often questionable whether this service promises good relations with customers or confirms their loyalty as patrons.

The idea expressed in this article was that credit was not as important to the firm as many managers believed.³

¹ D. H. Elmore, "Control of Credit by Feed Dealers," Feedstuffs, Vol. 28, No. 24 (June 16, 1956).

² Howard G. Diesslin, "Agricultural Equipment Financing," Occasional Paper 50 (New York: National Bureau of Economic Research, 1955).

³ Henry H. Bakken, "Some Facts About Retail Feed Distribution," Feedstuffs (June 30, 1956).

SCOPE AND METHOD

Data were available from earlier studies which made possible the observation of trends in accounts receivable credit. Records of 66 cooperatives were studied and selected factors of accounts receivable were observed for two business years, 1955 and 1963. By making comparisons for these two years, it was possible to study changes in the impact of open account credit on the 66 cooperatives over the eight-year period.

To study the Patron Finance Program, the names of the 54 cooperatives which had entered into contracts with Production Credit Associations in Kansas were obtained from the Federal Intermediate Credit Bank in Wichita. Questionnaires were submitted to each of these associations requesting information of four types: (1) accounting data for 1964, (2) accounting data for the business year immediately previous to the adoption of the Patron Finance Program, (3) information about the policies established by the association to deal with credit extension, and (4) information regarding the attitudes of the associations' patrons toward open account credit and the Patron Finance Program. Completed questionnaires were received from 45 associations including 31 of those making active use of the Program in 1964.

Accounting data for five of the six remaining associations which used the Program in 1964 were obtained from audits of the associations. A second questionnaire was submitted to each of the Production Credit Associations in Kansas. They were asked to supply the dollar volume of loans made to patrons of each

cooperative using the Program in 1964. Additionally, Production Credit Associations were asked to appraise the Patron Finance Program based upon their experiences. Responses were received from all Production Credit Associations having experience with the Program.

SOME TRENDS IN ACCOUNTS RECEIVABLE IN KANSAS COOPERATIVES

Data were assembled from 66 Kansas cooperatives in an attempt to gauge some of the trends in accounts receivable financing in Kansas cooperatives. No claim is made that these 66 associations constitute a random sample of Kansas cooperatives. However, this group is over 20 percent of the total population. They are from every part of the state. The range of size within the sample as measured by supply sales volume was noted to be almost as great as that of the entire population of Kansas cooperatives. It is believed that the trends noted in this group were quite typical of those in the population during this period.

The 66 associations from which data were used in this portion of the study were selected because they were included in a 1955 sample and a 1963 sample.¹ Since the associations were included in both samples, data were available to make a comparative analysis of certain trends in the same associations from the 1955

¹ Data used in the 1955 study were collected from 192 associations in Kansas. That group was believed to be representative of the total population because of the extremely high percentage of the population included. The sample used in the 1963 study was composed of the five largest associations in the state plus a random sample of the remaining population.

period to the 1963 period. The matter of this sample being random is not believed to be imperative since data from the same associations for two different time periods were used.

For purposes of analysis, the sample was divided into three groups on the basis of amount of supply sales to patrons in 1963. Group I was composed of those 25 associations in the sample whose 1963 supply sales were less than \$200,000. The 24 associations in Group II had sales of between \$200,000 and \$550,000 in 1963. The remaining 17 associations in Group III had supply sales of more than \$550,000.

The findings of this analysis are summarized in Tables 1 and 2. Table 1 shows a comparison of 1955 and 1963 figures for selective balance sheet and operating statement items. Supply sales for the entire sample increased 120% during the eight-year span. As could be expected from the manner in which the associations were grouped, the smaller associations showed a much smaller than average increase in sales while the larger associations recorded larger than average increases. Both current assets and current liabilities increased substantially for all three groups of associations during the eight years. Both increased more rapidly than did supply sales. The growth in current liabilities was much greater than that of current assets. Current liabilities increased more than twice as much as did current assets for the 66 associations.

Working capital decreased in the group of smaller associations from 1955 to 1963. And, while it did increase in the other

Table 1. Comparison of changes in selected balance sheet and operating statement items for 1955 and 1963, for 66 Kansas cooperatives by size groups.^a

	: : Group I	: : Group II	: : Group III	: Complete : sample
	(1955 to 1963 percentage change)			
Total supply sales	11.6	142.6	141.6	120.1
Current assets	69.6	166.0	190.1	167.3
Current liabilities	308.6	409.3	372.1	374.1
Working capital	(31.7) ^b	54.1	89.2	62.0
Patron's equity	161.7	129.8	143.4	141.6
Accounts receivable	161.2	178.0	393.7	281.7

^a The associations are grouped as follows: Group I, 25 associations having 1963 supply sales of less than \$200,000; Group II, 24 associations, 1963 supply sales of \$200,000 to \$550,000; and Group III, 17 associations with 1963 supply sales of over \$550,000.

^b Parenthesis indicates a negative percentage change.

two groups during this period, the increases were not nearly proportional to the increases in supply sales. The increase in patrons' equity for all 66 associations was greater than the increase in supply sales. Group I associations experienced the greatest percentage increase in patrons' equity, reflecting the ability of this group to finance a greater portion of its smaller growth through internal financing.

Accounts receivable increased over 280% for the entire sample or two and one-half times the increase in sales (Table 1). The largest percentage increase was in the Group III associations, but the Group I associations had an increase in accounts receivable of 161% while their sales increased only 11.6%. For the 66 associations, accounts receivable increased more than any other item except current liabilities.

Table 2. Comparison of accounts receivable as a percentage of supply sales, patrons' equity, and working capital in 1955 and 1963 for 66 Kansas cooperatives by size groups.^a

	Group I	Group II	Group III	Complete
	: 1955 1963	: 1955 1963	: 1955 1963	: sample
Percent of sales in accounts receivable	4.7 11.1	8.0 9.2	4.2 8.6	5.1 9.0
Percent of patrons' equity in accounts receivable	9.0 8.9	7.9 9.6	4.5 9.2	5.8 9.3
Percent of working capital in accounts receivable	20.8 79.6	24.5 44.2	16.7 43.6	19.5 45.9

^a See Table 1 for explanation of grouping.

Table 2 presents a summary of some calculations made to measure the impact of the increased accounts receivable on the associations in the sample. Three percentages were computed: percentage of total supply sales in year-end accounts receivable, and percentage of working capital in accounts receivable. A percentage figure is presented for each of the above three groups and the complete sample for 1955 and 1963. This presentation makes possible a comparison of some of the effects of accounts receivable credit extension in 1955 and in 1963. It also allows a comparison of the differing effects on each of the groups within the sample.

The first set of percentages in the table is the percentage of supply sales in year-end accounts receivable. Group I and Group III associations showed the most significant increases. The Group I associations had almost two and one-half times as large a portion of their supply sales in year-end accounts receivable at the end of 1963 as they did at the end of 1955, and the Group III associations had over twice the percentage of sales in accounts receivable at the end of 1963 as compared with the 1955 figure. This would indicate that either these associations were selling a greater percentage of sales on account or the accounts were turning over less rapidly in 1963 than in 1955. Since the percent of sales made on account is not available, there is no way of determining if either is the more adequate explanation. However, it seems most likely that both are true. Associations were making a larger portion of their sales on

credit and accounts receivable were revolving more slowly in 1963 than in 1955.

The second percentage computed is the percentage of patrons' equity in year-end accounts receivable. This percentage indicates the portion of the capital supplied by members which is being loaned back to them at the end of the year. The small associations experienced a slight decline in this percentage from 1955 to 1963. Group I associations had an above average proportion of their equity in accounts receivable at the end of 1955. Associations in Groups II and III experienced increases. The proportion of equity in year-end accounts receivable more than doubled in the large associations during the eight-year span. This occurred in spite of an increase of 143% in the patrons' equity in this group of associations.

The third ratio presented in Table 2 is the proportion of working capital in year-end accounts receivable. Working capital is the excess of current assets over current liabilities and is a measure of the current liquidity and flexibility of the firm. The greater the proportion of the working capital which is in accounts receivable, the less that is available for management to use in other areas. If a large portion of the working capital of a cooperative is being 'loaned' to its patrons, both the liquidity and the flexibility of the association will be impaired. The association may not be able to maintain inventory which would be most beneficial to its membership or it may not be able to add equipment to render better service to patrons.

Group I associations had almost 80% of their working capital in accounts receivable at the end of 1963 as compared with about 21% eight years earlier. The two groups of larger associations both experienced substantial increases in this percentage though their positions were not as serious as that of the smaller group.

This ratio of accounts receivable to working capital probably provides a more graphic view of the impact of the increased burden of accounts receivable on the 66 cooperatives than do any of the other percentages. It indicates the dilemma in which a cooperative finds itself as a result of an excessive burden of accounts receivable. Even if accounts are revolved regularly, they still absorb a portion of working capital which is in short supply in most instances. They have experienced large increases in sales volumes, but the working capital did not increase at a commensurate rate. The shortage of working capital is a problem of the first order in itself for many of the associations. But it is being compounded by the increased share of the working capital being taken to finance the credit function.

KANSAS COOPERATIVES WITH THE PATRON FINANCE PROGRAM

The following five sections are intended to describe the 36 cooperatives which used the Patron Finance Program in 1964, to lay the groundwork on which the later analysis is based. Particular attention is paid to supply sales made, amount of sales made on credit, and accounts receivable. Information regarding credit policies included on questionnaires completed by managers of 45 associations which have contracts under the Patron Finance

Program is summarized in the section on credit policies. The same 45 questionnaires are the basis for the section on patrons' attitudes toward open account credit.

Sales

The total amount of supply sales made by the 36 associations using the Patron Finance Program was \$33,763,479. Average supply sales for the group was \$937,874. Distribution of associations by amount of sales and the range of sales is given in Table 3. Supply sales made by associations in the group ranged from \$214,405 to \$4,343,865. There were a large number of associations in the smaller volume groups. The six largest associations accounted for about half of the total sales of all 36 associations.

Almost all of the associations had experienced some increase in sales during recent periods. Of the associations using the Patron Finance Program in 1964, only two failed to show an increase in 1964 supply sales from the period immediately preceding the adoption of the Patron Finance Program. Most associations had experienced substantial increases in sales. The fact that sales for the group had increased would seem to indicate that these cooperatives had managed to maintain or improve their sales positions relative to competitors. This has been done in spite of the conviction held by most of the managers that they have competitors offering more liberal credit terms. Cooperatives can initiate programs and formulate and enforce policies

Table 3. Distribution of 36 cooperative associations using the Patron Finance Program according to amount of total supply sales, 1964.

Amount of sales (dollars)	: : Number of : associations	: Percent of : total : associations
Less than 249,999	2	5.5
250,000 to 499,999	12	33.3
500,000 to 749,999	8	22.2
750,000 to 999,999	3	8.3
1,000,000 to 1,249,999	4	11.1
1,250,000 to 1,499,999	2	5.5
Over 1,500,000	5	14.1

Average: \$937,874

Range: Largest amount, \$4,343,865
Smallest amount, \$214,405

which will make it possible to live with the problem of open account credit. It may be necessary to forego some sales to achieve this goal. One manager took a very positive view of this alternative in giving an affirmative answer to the question of whether his association had lost sales to competitors offering more liberal credit terms. His response was that it had, but that the sales lost were more expensive than they were worth.

Credit Sales

Credit sales for the group totaled \$19,111,193 in 1964 for an average of \$530,866. Sales on account ranged from \$85,893 to

\$1,999,174. Credit sales averaged 57% of total supply sales for the group in 1964. The fact that almost three-fifths of the total volume of sales made by these 36 associations was on credit underscores the importance of the credit function to cooperative farm supply businesses. Distribution of associations according to amount of sales made on credit is shown in Table 4.

Table 4. Distribution of the 36 cooperative associations using the Patron Finance Program according to amount of credit sales, 1964.

Amount of credit sales (dollars)	: Number of : associations	: Percent of : total firms
Less than 149,999	2	5.5
150,000 to 299,999	11	30.5
300,000 to 449,999	8	22.2
450,000 to 599,999	6	16.6
600,000 to 749,999	2	5.5
750,000 to 899,999	0	0.0
Over 900,000	7	19.7

Average: \$530,866

Range: Largest amount, \$1,999,174
Smallest amount, \$85,893

An effort was made to determine whether or not a relationship existed between the volume of supply sales and percent of sales made on credit. A comparison of the percent of sales made on credit by the six associations in the group with the smallest supply sales was made with the percent of sales made on credit by

the six associations with the largest volume of sales in 1964. The group with the smaller sales volume had average supply sales of \$270,118 as compared with an average of \$2,553,216 for the larger volume group. The smaller associations made 72% of their sales on credit while the larger associations made 53% of their sales on credit. The percentage of sales made on credit for the entire group of 36 associations was 57%. This compares closely with the figure of 52% of sales made on credit by cooperatives in Kansas and Nebraska in 1957 as stated by Eichers' study on credit control.¹

Credit Policies

The term "credit policy" refers to the policies and procedures a business establishes with regard to its credit function. The credit policy states length of time credit will be extended or date subsequent to purchase that an account is due. It states when an account becomes delinquent and what action the association will take when an account falls into that category. The credit policy, in addition to the above, states whether discounts for cash or prompt payments will be allowed and whether or not an interest charge will be added to accounts after they are outstanding for a given length of time.

In Table 5, credit policies of the 45 associations from which this information was available were classified as to length

¹ T. R. Eichers, Credit Control in Selected Retail Farm Cooperatives-Area IV, U. S. Department of Agriculture Farmer Cooperative Service, General Report 57 (Washington: U. S. Government Printing Office, 1959), p. 17.

Table 5. Distribution of 45 cooperative associations according to the terms of the credit policy employed, 1964.

Time following purchase that payment is due	: Number of : associations
30 days	8
60 days	5
90 days	1
1st of month following purchase	5
10th of month following purchase	13
20th of month following purchase	2
End of month following purchase	4
Varies, according to type of supplies purchased	5
No written policy	2

of time following the purchase an account becomes due or by the date following purchase the account becomes due, depending upon how the policy is stated. Associations employed nine different credit policies based on length of time before an account comes due. The policy which was used by most associations was that under which the account comes due the tenth of the month following the purchase. This policy allows an average credit period of 25 days assuming that the credit purchases are evenly distributed throughout the month. The second most widely used policy was that which terms an account due 30 days following purchase. Twenty-six associations had policies which declared accounts due in an average period of 30 days or less.

One type of credit policy which was used by five of the associations needs clarification and is worthy of some interest. This type of policy is labeled "variable" in Table 5. The terms of this type of credit policy vary according to the type of supplies charged. Gasoline charged at the station may be on

30-day terms while accounts on fuel delivered to the farm may come due on four specific dates during the year. Fertilizer may be cash terms immediately following completion of application while tires may be charged for periods up to and including a year. The specific terms of these policies vary from one association to the next, but the intent to meet the terms offered by competitors is the same.

The 45 associations which completed questionnaires were divided in two nearly equal groups by the responses to the question of whether or not they used any type of credit analysis before extending credit to a new applicant. Fifteen of the 45 used a formal application for credit. The sources of credit information used most often were credit bureaus, local banks, and Production Credit Associations, in that order.

Cooperative managers were asked if they granted discounts for cash payments or charged interest on overdue accounts. Nine associations granted discounts on cash or prompt payments on all items while five allowed discounts on one or two items. Twenty-three, or slightly over half of those associations responding, did add an interest charge to overdue accounts. There was a large variation in the rates of interest charged and in the length of time after the account was due before the interest charge began to accumulate. Four associations used both discounts and interest charges.

Approximately one-half of the associations had converted overdue accounts into notes during the past year. This action

was regarded by some managers as a last-ditch measure. They felt that notes had little more value than accounts. Such notes can be discounted only with recourse and sometimes not at all.

Accounts Receivable

Outstanding accounts receivable for the 36 associations at the end of their 1964 business year totaled \$2,062,796 or an average of \$57,300 for each association. The distribution of the associations according to the amounts of outstanding accounts receivable is given in Table 6.

Table 6. Distribution of the 36 cooperative associations using the Patron Finance Program according to the amount of accounts receivable outstanding, 1964.

Amount of accounts receivable (dollars)	: : Number of : associations	: : Percent of : total : associations
Less than 19,999	6	16.6
20,000 to 39,999	10	28.1
40,000 to 59,999	9	25.0
60,000 to 79,999	2	5.5
80,000 to 99,999	3	8.3
100,000 to 119,999	1	2.7
Over 120,000	5	13.8

Average: \$57,300

Range: Largest amount, \$224,427
Smallest amount, \$688

The use of the year-end data undoubtedly makes the accounts receivable situation in these associations appear more favorable than would be the case if monthly average accounts receivable data were available. In associations where the business year coincides with the calendar year, a very considerable repayment of accounts outstanding is experienced immediately prior to the audit date. This is the case because farmers operating on a cash basis for tax purposes must pay expenses before the end of the year in order to include them on their tax returns. And due to the nature of the season, purchases are the lowest at the end of the year. Eichers found that December 31 accounts receivable in Kansas and Nebraska associations included in a Farmers Co-operative Service study were 69% of the monthly average accounts receivable.¹

The management of a business will normally try to improve the condition of the business before the end of the fiscal year. This will tend to present a more favorable view of the business to the stockholders. As evidence to the fact that this practice is also used in cooperatives, Eichers found that fiscal year-end accounts receivable were only 59% of the monthly average accounts receivable.²

Accounts receivable data obtained from cooperatives using the Patron Finance Program were fiscal year-end data. These data were used because the monthly average data which would provide a

¹ Eichers, p. 17.

² Ibid.

more accurate indication of the situation in most of these associations were not available. Therefore, the problem of accounts receivable is no doubt more serious than is indicated by the data presented. Estimates of the monthly average outstanding accounts receivable were made later in this section in an effort to give a more accurate indication of the problem.

The age of accounts receivable is indicated by classifying accounts according to the length of time outstanding. Four age classifications were used: (1) less than 30 days, (2) 30 to 90 days, (3) 90 to 360 days, and (4) over 360 days. Table 7 shows a comparison of the aging of accounts receivable of the two groups of associations which were used in the preceding section. The groups are composed of the six associations with the smallest volume of supply sales and the six associations with the largest volume of sales. Aging of the receivables of all 36 associations is also included in Table 7.

Table 7. Percentage of year-end accounts receivable in different age classifications in Kansas cooperative associations using the Patron Finance Program, 1964.

Age classification	Six smallest : :associations	Six largest : :associations	All 36 :associations
	(percent of total accounts receivable)		
Less than 30 days	37.7	48.1	45.0
30 to 90 days	26.0	22.7	23.2
90 to 360 days	35.3	27.8	28.4
Over 360 days	1.0	1.3	3.4

Large associations had a higher percentage of their accounts in a current condition than small associations or the entire group. The most significant finding presented in Table 7 is the percentage of accounts over 90 days of age. In the preceding section on the credit policies, it is shown that, of the 45 associations for which information was available, only six employed credit policies which made provision for any account to be outstanding for as long as 90 days. One association used a 90-day credit policy and five associations allowed 90 days for payment on purchases of some supplies. And 26 associations had credit policies which called for payment in 30 days or less. All but five associations using the Patron Finance Program were included in that group.

In view of the fact that over 30 percent of the outstanding year-end accounts receivable in these 36 associations were over 90 days of age, it is obvious that the credit policies are not being very strictly enforced. It must also be remembered that the situation probably was more favorable at this point than any other time during the year for most of the associations.

One of the most widely applied measures of the length of time required to convert the accounts receivable into cash is the receivables turnover ratio. It is computed as follows:¹

$$\frac{\text{Total credit sales}}{\text{Outstanding receivables}} = \text{receivables turnover ratio.}$$

¹ Theodore N. Beckman, Credits and Collections (New York: McGraw-Hill Book Company, 1962), p. 634.

For example, assume that a firm has credit sales during the year of \$100,000 and has accounts receivable outstanding of \$10,000. The receivable turnover ratio is 10. This ratio indicates that the business experiences a complete turnover of its accounts receivable 10 times each year or each 36 days.

A high turnover ratio indicates more efficient utilization of capital being used in the credit function. If, in the above example, the ratio value were 15 rather than 10, 50% more credit sales could be obtained using the same amount of capital to finance the accounts receivable. Or the same amount of credit sales could be made while only two-thirds the amount of accounts receivable would need to be carried by the firm.

The accounts receivable turnover ratio was computed using the year-end receivables data for the entire group of associations using the Patron Finance Program and the two groups of six associations each. These ratio values are shown in Table 8.

Table 8. Accounts receivable turnover ratios for Kansas cooperative associations using the Patron Finance Program, 1964.

Method of computation	:Six smallest :associations	: Six largest : :associations	: All 36 :associations
(turnover ratios)			
Using year-end data	11.9	9.3	9.3
Using estimated average data	8.4	6.5	6.5

Receivable turnover ratios were computed for the three groups of associations using estimated average accounts receivable figures (Table 8). These estimates were made on the assumption that the year-end accounts receivable were 70 percent of the monthly average. The 70 percent estimate is conservative when compared with the 59 percent found by Eichers.¹ Ratios were computed to give a more accurate indication of the actual accounts receivable situation faced by these associations. It is, however, only an estimate.

The number of days required for a complete turnover of the accounts receivable for small and large associations and all 36 associations was calculated using the turnover ratios found in Table 8. This measure is computed as follows:²

$$\frac{360 \text{ days}}{\text{Turnover ratio}} = \text{days for one turn of receivables.}$$

This measure may also be called "number of days credit sales outstanding." Stated in this manner, it is of more value in determining the effectiveness of the enforcement which the credit policy is receiving. Chapin stated that under normal circumstances, the credit function is under control as long as no more than 25 percent of the previous month's receivables are outstanding at the end of the current month.³ Thus, 35 to 40 days credit

¹ Eichers, p. 17.

² Beckman, p. 635.

³ Albert F. Chapin, Credit and Collection Principles and Practice (New York: McGraw-Hill Book Company, Inc., 6th Edition, 1955), chap. 13.

sales outstanding on the statement of a firm selling on 30-day terms would be a favorable showing.

The 36 associations using the Patron Finance Program sold on the average on terms of 30 days. Accordingly, 35 to 40 days credit sales outstanding would reflect prudent management of the credit function. The small associations were within the standard on the basis of year-end data (Table 9). This may be true because they are better able to collect a large portion of their smaller totals of accounts receivable at the close of their fiscal years than are the larger associations. This would cause higher values for the turnover ratios and resulting lower numbers of days credit sales in accounts receivable when these values are computed on the basis of year-end data. Monthly average data which would reflect the situation over the entire year.

Table 9. Comparison of number of days credit sales outstanding, using year-end and estimated monthly average^a accounts receivable data in Kansas cooperative associations using the Patron Finance Program, 1964.

Method of computation	:Six smallest :associations	: Six largest : :associations	: All 36 :associations
	(days)		
Using year-end data	30.3	38.7	38.7
Using estimated monthly average data	42.9	55.4	55.4

^a The year-end accounts receivable totals are assumed to be 70 percent of the monthly average figure in each case.
See page 26.

The large associations and the entire group had 55 days credit sales outstanding in estimated monthly average accounts receivable. This analysis suggests a considerable departure from stated policy. Credit is being extended, according to the estimate, for an average period of 55 days while 35 to 40 days would be acceptable under the average credit period allowed. This estimate may overstate the real situation somewhat. However, it is conservative when compared with other studies.¹ The high percentage of the accounts over 90 days in age is also a strong indication of lax enforcement of the credit policies.

Attitudes Toward Accounts Receivable Credit

Cooperative managers were asked several questions relating to the attitudes of their patrons toward open account credit. Managers were asked to rate four factors in order of importance in causing patrons to request credit. The four factors were: (1) need for credit, (2) availability of credit from competitors, (3) habit of buying on credit, and (4) convenience. There was little agreement among managers as to how these factors should be rated, but the group as a whole considered need for credit as the single most important factor and convenience a close second.

There was almost unanimous agreement that credit is an important factor in making a large percentage of farm supply sales. Attesting to this opinion is the fact that 57% of all sales made by their associations were on credit. And, with few

¹ Eichers, p. 17.

exceptions, managers reported their associations had lost sales to competitors offering more liberal credit terms. References were made repeatedly to competitors offering crop-year financing on supplies such as fertilizer and fuels.

Managers, in general, felt their patrons did not look upon owing an account to their cooperative association as being in debt. Some managers modified the statement to indicate that this was true only of a portion of their patrons. However, one manager's response seemed to summarize the feelings of the majority. Referring to those owing accounts at the cooperative, he wrote: "(the cooperative) is the last place they think they have to pay."

Over half of the managers felt that the addition of interest charges to overdue accounts would help to alter the tendency of some patrons to be nonchalant in paying their accounts. Several associations were using interest charges. Those managers were divided as to whether or not interest charges affected patrons' attitudes toward repayment.

THE PATRON FINANCE PROGRAM

The Patron Finance Program was proposed in 1957 by Mr. Andrew Lampden, President of the St. Paul Federal Intermediate Credit Bank. It was approved by the Farm Credit Administration and initiated the following year on a pilot basis in several Production Credit Associations in the St. Paul District. Preliminary results were encouraging and the Program was extended

throughout the district. It was rapidly adopted by several other Federal Intermediate Credit Banks. Kansas Production Credit Associations first offered the Patron Finance Program to cooperatives in the state in 1960. The following sections describe and explain the Program. The extent to which the Program has been used in Kansas is measured, and its effectiveness in achieving the objectives set for it is analyzed.

Initiating the Patron Finance Program

The Program is initiated by a cooperative association expressing the desire to adopt it. Upon receiving this notice, the Production Credit Association board of directors investigates the financial strength and other related credit factors of the cooperative to determine the maximum amount of loans to be made on that cooperative's endorsement. After deciding to enter into the Program with the cooperative, the Production Credit Association then refers the request to the Federal Intermediate Credit Bank to obtain concurrence on the amount of the commitment. If the cooperative has an outstanding loan from the Bank for Cooperatives, that organization is notified of the intention of the Production Credit Association to enter into an arrangement to finance patrons of the cooperative.

When preliminary arrangements described above have been completed, the Production Credit Association and the cooperative are ready to enter into a written contract. This is called a guaranty agreement. The contract establishes the rights, duties,

and obligations of each party to the other with respect to the Program. The guaranty follows the format suggested by the Farm Credit Administration. A sample guaranty plan is presented in Appendix I.

Important Features of the Guaranty Agreement

The most important single feature of the contract is the guaranty clause. The cooperative agrees to guarantee payment of all loans made to its patrons by the Production Credit Association. Production Credit Associations have the prerogative of making loans on their own merits after a credit investigation. Almost all of the guaranty agreements have a clause which allows the cooperative to discount loans of less than a specified amount with the Production Credit Association without any credit investigation by that institution. Loans are made solely upon the guarantee of the cooperative. This limit is normally about \$500 for an individual patron. However, the procedure is rarely used.

The guaranty feature of the agreement between the cooperative and the Production Credit Association is necessitated by the fact that Production Credit Associations are forbidden by law to make any unsecured loans. All loans they make must have some type of security. Notes may be secured by a mortgage on real or chattel property, or, in the case of the Patron Finance Program, a guarantee of repayment by the cooperative.

The second principal feature of the agreement is the manner in which the stock purchase requirement of all borrowers of

Production Credit Associations is satisfied. Each Production Credit Association borrower is required to purchase \$5 of stock in that association per \$100 borrowed. This requirement is met for patrons borrowing through the Patron Finance Program by the purchase of Class A (non-voting) stock by the cooperative in an amount equal to 5 percent of the maximum commitment established in the guaranty agreement. When a patron agrees to sign a Production Credit Association note for supplies to be purchased, the required amount of stock is converted to Class B (voting) stock and is held in the patron's name until the loan is repayed. Then the stock is reconverted to Class A stock and returned to the cooperative.

Operation of the Program

The operation of the Program is quite simple. The patron agrees to accept a line of credit to pay for his purchases at the cooperative. Then, the patron and the cooperative manager jointly determine the patron's financing needs for the coming season and prepare loan applications for credit to meet these needs. The required applications include a statement of the patron's current financial condition and a description of his farming operations. The patron is asked the number of acres of each crop he plans to raise and the type and size of the livestock enterprises he will have. The patron must also agree to stock arrangements specified in the guaranty agreement. Samples of the required agreements are included in Appendix II. A loan

application is usually held until the first delivery of farm supplies to the patron. The applications and the charge ticket for the delivery are sent to the Production Credit Association. The Production Credit Association then processes the application through its normal channels and pays the cooperative for the delivered supplies. As the cooperative makes more deliveries to the patron, the Production Credit Association is informed and pays the cooperative. These remittances are added to the patron's loan balance. Patrons may either repay the loan directly to the Production Credit Association or to the cooperative.

Objectives of the Patron Finance Program

Objectives of the program are twofold: to ease or eliminate the problem of accounts receivable for cooperatives and to increase the loan volume and attract new patrons for Production Credit Associations. Those initiating the Program hoped that it would ease the pressure of accounts receivable on working capital of many cooperatives. Furthermore, it was hoped that the Program would be a means of eliminating the need of cooperatives performing a banking function. Extension of open account credit beyond convenience terms by cooperatives is regarded as unfortunate by most cooperative leaders. Such credit is thought to be too costly to patrons and detrimental to the efficiency of the cooperative. The Patron Finance Program was viewed as a means of extending needed credit to farmers on a basis which would result in lower cost credit.

Production Credit Associations hoped to acquire new patrons through the Program. It was assumed they could convert some of those farmers financing through the Patron Finance Program to become regular members of the Production Credit Association who would finance their entire operations through it. This study is concerned mainly with evaluating the Program on the basis of its fulfillment of the objective it was to achieve for cooperatives.

Extent of Use in Kansas

The Patron Finance Program has been offered to Kansas farm supply cooperatives since 1960 by all 13 Production Credit Associations in the state. Fifty-four cooperatives entered into contracts with 12 Production Credit Associations. During 1964, 36 of the 54 cooperatives which had contracts made active use of the Patron Finance Program. Eleven Production Credit Associations made loans through agreements with a participating cooperative in 1964.

The 11 Production Credit Associations loaned a total of \$654,101 under the Patron Finance Program in 1964. A distribution of Production Credit Associations according to volume of money loaned is shown in Table 10. Variation in amounts of money loaned by individual Production Credit Associations was quite large, ranging from \$7,084 to over \$170,000. The two Production Credit Associations with the largest volume of money loaned through the Patron Finance Program in 1964 accounted for over half the total volume of money loaned through the Program.

Table 10. Distribution of Kansas Production Credit Associations according to the volume of money loaned through the Patron Finance Program, 1965.

Volume of money loaned (dollars)	: : Number of : associations	: : Percent of : total : associations
Less than 29,999	3	27.3
30,000 to 59,999	5	45.6
60,000 to 89,999	1	9.0
90,000 to 119,999	0	0.0
Over 120,000	2	18.1

Average: \$59,646

Range: Largest amount, \$170,158
Smallest amount, \$7,085

Distribution of 36 cooperative associations which made use of the Program in 1964 according to dollar volume of loans made to patrons through the Program is shown in Table 11. Volume of usage by association also varied widely. The range in volume of usage in 1964 was from slightly over \$100 to over \$101,000 for a single association.

There was, however, only one association whose patrons borrowed over \$50,000 through the Patron Finance Program in 1964.

The most accurate measure of the extent of use to which a cooperative makes of the Program is the percentage of an association's credit sales paid by borrowing through the Program. The reasoning is that even though a small association may generate a much smaller volume of borrowing through the Program than a larger association, it may be receiving repayment for a much

Table 11. Distribution of cooperative associations using the Patron Finance Program according to the volume of money loaned through the Patron Finance Program, 1964.

Volume of money loaned (dollars)	: : Number of : associations	: Percent of : total : associations
Less than 4,999	7	19.4
5,000 to 9,999	8	22.6
10,000 to 14,999	4	11.1
15,000 to 19,999	5	13.8
20,000 to 24,999	2	5.5
25,000 to 29,999	5	13.8
Over 30,000	5	13.8

Low: 115

High: 101,573

larger percentage of its credit sales through the Patron Finance Program. Thus, the smaller association would be making greater relative use of the Patron Finance Program in this respect.

A distribution of 36 cooperatives using the Program in 1964 according to the percentage of credit sales repaid through the Program is shown in Table 12. Percentages ranged from less than 0.5 percent to over 17 percent. The average for all 36 associations in 1964 was 3.4%. Only two associations had over 10% of their credit sales paid through the Patron Finance Program.

This lack of volume is probably the strongest indictment of the Patron Finance Program in Kansas. It was used by only 36

Table 12. Distribution of Kansas cooperative associations using the Patron Finance Program according to the percentage of credit sales paid through the Program, 1964.

Percent of credit sales paid through program	: : Number of : associations	: : Percent of : total : associations
Less than 0.49	2	5.5
0.5 to 1.99	11	30.8
2.0 to 3.49	8	22.2
3.5 to 4.99	4	11.1
5.0 to 6.49	2	5.5
6.5 to 7.99	5	13.8
Over 8.0	4	11.1

Average: 3.5%

Range: Largest percentage, 17.9
Smallest percentage, 0.3

cooperatives in 1964 and less than 4 percent of the credit sales made by this group were paid by patron borrowing through the Program. The earlier section on the accounts receivable situation in these 36 cooperative associations indicates they were extending large amounts of open account credit in 1964. It was also estimated that credit was being extended for periods considerably beyond the 30-day period specified in most of the credit policies and generally regarded as credit justifiable on the basis of convenience. Use of the Program has not solved the problem of accounts receivable for the group of associations using it.

Analysis of the Effectiveness of the Patron Finance Program

The objective of this analysis was to determine to what extent the Patron Finance Program has achieved its objective of reducing the burden of accounts receivable on cooperatives. It has been stated previously that associations in the Program still had an accounts receivable problem in 1964. If, however, it could be shown that the problem was less severe than that being experienced prior to adoption of the Program, it then could be said the Program had had a beneficial effect.

In an effort to evaluate the Program in this light, two measures of the amount of accounts receivable being carried by these associations were applied: (1) percentage of total supply sales in year-end accounts receivable, and (2) percentage of working capital in year-end accounts receivable. The first is a measure of the turnover of the receivables while the second is a measure of the "weight" of the burden of accounts receivable on the cooperatives extending credit. Measures were calculated using 1964 data for the 36 associations. These measures were then compared with the same calculations made, using data from each of the associations for the fiscal year immediately previous to the adoption of the Patron Finance Program. For example, if a cooperative began to use the Program in 1962, 1961 data were used for purposes of the comparison.

Values computed for cooperatives in the Program for selected measures and time periods are shown in Table 13. Percent of sales

Table 13. Comparison of percentages of total supply sales and working capital in year-end accounts receivable in 1964 and earlier periods in the 36 Kansas cooperatives using the Patron Finance Program, 1964.

Measure	: Earlier : period ^a	: : 1964
Percent sales in accounts receivable	5.4	6.1
Percent working capital in accounts receivable	48.0	81.0

^a Earlier period is the year immediately previous to one in which the Patron Finance Program was first used.

in year-end accounts receivable increased somewhat for the group. Percent of working capital in accounts receivable increased from 48% to 81% since adoption of the Program to 1964 for the group. These measures indicate that accounts receivable were more of a problem for the 36 cooperatives than was the case previous to the adoption of the Program. This is not to say that the Patron Finance Program is responsible for the increased problems. As was shown in an earlier section, the problem has been increasing in severity for cooperatives generally in Kansas. The Program has not been successful in combating this trend in associations using it in Kansas.

As was shown in Table 12, there was a wide range in the degree to which the Patron Finance Program had been utilized by the individual cooperatives as measured by the percentage of their credit sales which were handled through the program. The average for the entire group of 36 cooperatives was 3.5% of their

credit sales paid through the Program. To determine whether any advantages of more significant use of the Program could be shown, nine associations, one-fourth of all, which had made the most use of the program as measured by the percentage of their credit sales paid through the Program, were selected. They averaged almost 9 percent of their credit sales paid through the Program. The two measures calculated earlier in this section for the entire group were calculated for these nine. A comparison of the values found for the entire group and those found for the nine is shown in Table 14.

Table 14. Comparison of percentages of total supply sales and working capital in year-end accounts receivable in 1964 and earlier periods^a in the 36 Kansas cooperatives using the Patron Finance Program and the nine most significant users of the Program.^b

Measure	: : Period	:36 associ- : ations	: 9 associ- : ations
Percent sales in accounts receivable	1964 earlier period	6.1 5.4	5.8 6.1
Percent working capital in accounts receivable	1964 earlier period	81.0 48.0	42.4 50.4

^a See Table 13 for explanation of meaning of earlier period.

^b Significance of use is based upon percentage of credit sales paid through the Program.

Some rather striking contrasts are noted. Where the percentage of sales in year-end accounts receivable increased from the earlier period to 1964 for the entire group, the percentage declined for the nine associations making the most significant

use of the Program. This would indicate slower turnover of accounts receivable for the 36 associations as a group and more rapid turnover for the nine associations. The percentage of working capital in year-end accounts receivable increased very substantially for the entire group using the Patron Finance Program, but actually declined eight percentage points for the nine associations. This measure would indicate that accounts receivable placed more of a strain on the 36 associations at the end of 1964 than at the end of the year previous to the adoption of the Patron Finance Program. However, the nine associations needed less of their working capital to finance the credit function than they did previously.

If it were possible to attribute all the differences noted in the accounts receivable situations of the group of 36 associations and the nine selected from among them to the Patron Finance Program, an unqualified judgment regarding the performance of the Program in these associations could be made. However, many other factors could have had as much or more effect than did the use of the Patron Finance Program. For example, the nine associations might have done a more effective job than other cooperatives of enforcing credit policies. Even after conceding that other factors likely have contributed to the more favorable posture of the nine associations, it still appears quite significant that these nine should show improvement in their accounts receivable situations while the group as a whole has experienced a worsening problem in this regard.

Attitudes Toward the Patron Finance Program

One of the most important factors affecting the success of any innovation such as the Patron Finance Program is the attitude of the people who are directly concerned with the new procedure toward it. In the case of the Patron Finance Program, there are three classes of individuals and groups who are directly concerned with it: (1) cooperative patrons, (2) cooperative associations, and (3) Production Credit Associations. Given the attitudes of these principals toward the Program, one could predict in advance the success it would enjoy.

The managers of cooperatives and Production Credit Associations which have had experience with the Program were asked to make their observations regarding the Program and the attitudes of the patrons toward it. This section is based upon the responses of those managers.

An accurate measurement of the nature and strength of attitudes is different. Attitudes toward the Program suggested in this section have not been examined thoroughly and in depth, but they do offer some explanation of performance of the program in Kansas. Weights were not given to responses; that is, no enumeration was made of the number of times a specific objection to the Program was reported. This effort was directed toward finding attitudes and objections which would affect the acceptance and use of the Program.

Objections to the Patron Finance Program by patrons as reported by cooperative managers could be summarized in four

specific objections: (1) they do not want to make out the required financial statement, (2) the interest rate charged by Production Credit Associations is too high or higher than that charged by local banks, (3) patrons would rather borrow from their bank if they must borrow, and (4) there is too much "red tape" involved in the Patron Finance Program. In general, managers felt patrons were loathe to use a means of financing purchases which had an explicit interest charge attached when it was possible to charge purchases elsewhere without incurring interest.

Patrons who used the Program were well satisfied with it according to cooperative managers. Apparently, patrons who had accepted the idea of paying an interest charge for money borrowed to purchase farm supplies had few objections to the Patron Finance Program. This would suggest that interest charges were the greatest impediment to more extensive usage of the Program. Interest charges on money borrowed were less than that which would be added by interest charges on over-due accounts specified by the credit policies of many cooperatives in the Program. If credit policies were being strictly enforced and interest charges added to accounts, a considerable incentive to use the Program or other means of financing would be created.

It was reported that many patrons would prefer to deal with commercial banks. This is indicated by the number of cooperatives which reported arrangements with local banks similar to the Patron Finance Program presently in operation. There

appeared to be some misunderstanding of the nature of Production Credit Associations on the part of some farmers. Production Credit Associations often were located considerable distances from associations with which they had contracts. Therefore, patrons often were unfamiliar with operations of Production Credit Associations.

Managers of cooperatives which offer the Patron Finance Program listed a number of objections to the Program from their viewpoint. Some felt there was a lack of interest and cooperation in promoting the Program on the part of the Production Credit Associations. Some managers criticized Production Credit Associations for not trying more vigorously to collect and for not calling on patrons to convert to regular Production Credit Association membership.

Another objection reported was financial risk to the cooperative in the event one of its patrons defaulted. It seems doubtful if there is any more danger to a cooperative in this situation than if the patron had made the purchase on open account and then proved to be unwilling or unable to pay. The fact that the patron had signed a note would give the cooperative a somewhat stronger claim than if it were an overdue account on books of the cooperative.

The stock purchase requirement was mentioned by a number of managers as a drawback to the Program. This requirement along with the necessity of guaranteeing loans by the cooperative were regarded as big disadvantages of the Program as compared

with similar arrangements that several associations had made with local banks. Agreements with banks apparently place no such requirements upon cooperatives. The feeling was expressed by some managers that they didn't wish to hurt the local banks. Some also said they would rather place the loans locally rather than with a Production Credit Association located a considerable distance away.

Production Credit managers were asked to make comments regarding the Patron Finance Program based upon their experiences. As a group, they felt it was working well where it was being used. They were somewhat at a loss to explain lack of volume that the Program had attained and some were concerned about the fact that the Program was not on a paying basis for their associations.

Some Production Credit Association managers placed a large share of the blame for lack of volume on cooperative managers. Cooperative managers were criticized for not understanding the Program, for not being sufficiently aggressive in selling patrons on using the Program, for not selecting good prospects for the Program, and for attempting to shift slow accounts to the Patron Finance Program.

It appeared the chief objection to the Patron Finance Program by the patrons was their reaction to interest being charged. In light of this, it is unlikely that a large portion of the burden of accounts receivable could be shifted from the cooperative to the Patron Finance Program unless associations adopted and enforced strict credit policies. To shift the burden to the

Program, cooperatives must either force their patrons to use the Patron Finance Program or other means of financing purchases. Such a policy would cause loss of sales for most, if not all, of the cooperatives.

This may seem a harsh judgment, but the issue is clear. If the patrons object to paying interest, as they apparently do, they are not going to adopt the Program in large numbers when they can purchase supplies at the cooperative on open account. This is particularly true if patrons can get credit for as long as they want or need it from the cooperative without incurring an interest charge. If the cooperative then tries to force patrons to use the Program or other means of financing, some of them will shift to competitors offering more credit or more favorable items.

SUMMARY AND CONCLUSIONS

Accounts receivable credit continues and seems to be growing as a problem for Kansas cooperatives. Data were available for a group of 66 cooperatives to make a comparative study of percentages of sales, working capital, and patron's equity in year-end accounts receivable in 1963 when compared with 1955. This analysis indicated that receivables were a greater burden for these associations in 1963 than in 1955.

The P.C.A.--Cooperative Patron Finance Program was conceived as a means of reducing the burden of accounts receivable for cooperatives. The Program is an agreement between a cooperative association and a Production Credit Association to extend lines

of credit to patrons agreeing to sign a note to finance purchases. Each patron's line of credit would be subject to approval by the Production Credit Association's loan committee and must be guaranteed by the cooperative.

Fifty-four cooperative associations had entered into agreements with Production Credit Associations in Kansas under the Patron Finance Program of 1964. Of these, 36 made active use of the Program in 1964. Patrons of the 36 associations borrowed a total of \$654,101 from the 11 Production Credit Associations in Kansas which had active contracts in 1964. There was much variation in the amount borrowed by members of the individual associations.

The 36 associations had total supply sales of \$33,763,479 or average sales of \$937,874. Sales made by individual associations in the group ranged from \$214,405 to \$4,343,865. Almost all associations had experienced substantial increases in sales volumes during the past few years.

As evidence of the importance of credit to sales, it was found that 57 percent of the sales made by the group had been on credit. Smaller associations in the group sold a significantly larger percentage on credit than did larger associations.

The average credit period specified in the credit policies of the cooperatives using the Patron Finance Program was about 30 days. An analysis of accounts receivable based on year-end data indicated adherence to the policies. However, when estimated monthly average data were used in making the analysis, an average

credit period of 55 days was found, indicating a considerable departure from stated policies. Supporting this conclusion is the analysis of the age of the accounts, which showed that over 30 percent of the accounts outstanding were in excess of 90 days in age.

The 45 cooperative managers who completes questionnaires felt, in general, that credit was an important factor in making sales but that patrons did not look upon owing an account as being in debt. They were more divided as to reasons why patrons desire credit, but indicated that need and convenience probably were the most important factors involved.

Significance of the use which an association made of the Patron Finance Program was measured by the percentage of its credit sales handled through the Program. Percentages of credit sales paid through the Program ranged from less than 0.5 to over 17.0. The average for the 36 associations using the program was 3.4 percent.

Two measures of the accounts receivable situation in the 36 associations using the Patron Finance Program were applied: (1) percentage of total sales in year-end accounts receivable, and (2) percentage of working capital in accounts receivable. These measures were applied to 1964 year-end data and to data from the end of the business year immediately previous to the adoption of the Patron Finance Program. This procedure allows a comparison of the situation before and after use of the Program. The accounts receivable were turning more slowly in 1964 than in the

earlier periods, as indicated by a higher percentage of total sales in accounts receivable. Accounts receivable in the group also absorbed a much higher percentage of working capital in 1964 than in the periods before the Patron Finance Program was adopted. Both measures indicated that the Program had been of little positive benefit for the entire group using it in 1964.

The same measures were applied to the nine associations which made the most significant use of the Patron Finance Program in 1964, to determine if it had been of benefit to them as compared with the entire group. The program appeared to have helped ease the burden of accounts receivable for these nine associations. They had smaller percentages of sales and less working capital in accounts receivable at the end of 1964 than at the end of the last business year prior to the adoption of the Program. Both findings were in contrast to trends noted for the group as a whole.

The study was not designed to test attitudes of patrons toward the Patron Finance Program, but the cooperative managers were asked to summarize their patrons' feelings toward it. They reported that, in general, patrons using the Program were well satisfied with it. Main objections to the Program were: (1) the interest charge, (2) having to fill out a balance sheet, and (3) they did not want to deal with an institution other than their local bank.

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APPENDIX I

GUARANTY PLAN

THIS AGREEMENT, Made and executed this _____ day of _____, 19____, by and between

Name of Cooperative

of _____,
a corporation organized under the laws of the State of _____,
hereinafter called the "Corporation," and the _____
Production Credit Association, of _____,
_____, a corporation organized under the
laws of the United States, hereinafter called the "Association";

WITNESSETH:

WHEREAS, the Corporation is desirous of using the services of the Association to finance sales to its patrons, hereinafter referred to as patrons, and

WHEREAS, the Association is likewise desirous of making available its services for such purposes, and

WHEREAS, the Corporation, in consideration of the Association's making its services available in accordance with the terms of this agreement, is agreeable to, and desirous of, guaranteeing all notes and obligations of its patrons granted by loans by the Association, and

WHEREAS, the Corporation, until such time as it is eligible to invest in and purchase class A stock in the Association, is desirous of establishing with the Association a fund to be held in trust and used for the purpose of making class B stock of the Association available to its patrons,

NOW, THEREFORE, in consideration of the mutual promises and agreements herein contained, and to induce the Association to make loans to its patrons, and other good and valuable consideration, it is mutually agreed by and between the parties hereto that:

1. The Corporation warrants it has full power and authority to negotiate credit for its patrons with the Association and full power and authority, among other things, to guarantee the notes and obligations of its patrons given to the Association.

(Guaranty Plan - Continued)

2. The Corporation agrees to submit annually to the Association, and at such other times as the Association may request, a statement of its financial condition and such other information as the Association may require.
3. The Corporation shall prepare and transmit to the Association, on forms furnished by the Association for such purposes, executed loan applications, together with the necessary promissory note or notes and other required documents.
4. The Association agrees to make loans to patrons on all loan applications approved by it in a maximum amount outstanding at any one time not exceeding \$_____ in the aggregate.
5. The Association agrees without credit analysis to approve all such eligible loan applications submitted to it not in excess of \$_____ in any one year per patron, provided that the maturity of notes taken in connection with such applications shall coincide with the plan of repayment, but in no instance more than one year from the date of the note.
6. Loan applications in excess of such amount may in the discretion of the Association be approved.
7. Upon approval of any loan application, the Association shall transmit to the Corporation, as requested, the amount of the loan proceeds. If a loan application is not approved, the Corporation shall be promptly notified and the related promissory note or notes returned to the Corporation, the Association retaining the application.
8. The Corporation does hereby guarantee the payment when due, with accrued interest and costs, of any and all indebtedness due or owing the Association arising from any loan made, or note or notes executed by a patron of the Corporation to the Association pursuant to this agreement. This guarantee shall be a continuing one and acceptance thereof is waived. The Corporation waives presentment, demand, protest, notice of protest, and the Corporation hereby consents to the renewal from time to time of any note or notes evidencing any of such indebtedness or liability. The Association agrees to notify the Corporation promptly when any such obligation becomes due and payable and is unpaid. The Corporation agrees to repurchase from the Association all notes after they are _____ days past due.
9. Upon request by the Corporation and upon payment to the Association of all amounts of principal, interest, and costs due the Association arising from said guarantee, the Association agrees to transfer to the Corporation any such note or notes representing such obligations, together with the related collateral, if any. The Corporation may repurchase at any time any note or notes, at their face value, when such action is necessary to protect its interest.

(Guaranty Plan - Concluded)

10. The Association in its discretion, and upon written notice to the Corporation, may waive the guarantee set forth in section 8, above, with respect to any loan or loans that are acceptable to it from a credit standpoint without said guarantee.
11. Until such time as the Corporation shall be eligible to invest, and purchase class A stock in the Association, it agrees to deposit and keep on deposit with the Association, in trust, cash in an amount sufficient at all times to meet its patrons' requirements for purchase of class B association stock, unless such patrons shall meet such requirement. Such stock shall be issued and held in accordance with the prior direction of the patron.
12. Upon investment and purchase of class A stock in the Association by the Corporation, such stock owned and held by the Corporation may at the Corporation's request, and in accordance with the Association's bylaws, be transferred to the patron and converted by him into class B stock to meet the Association's requirements for purchase of such class B stock by a patron. The Association agrees that it will, at such times and in such amounts as the Corporation shall request, sell and transfer to the Corporation such amount of Class A Association stock as may be requested by the Corporation, and further agrees, with the consent of the patron, upon full repayment of any loan made under this agreement to convert the patron's related association B stock to A stock and transfer the A stock to the Corporation, after which it may be retired and canceled in any manner permitted by the Association's bylaws.
13. It is understood and agreed by the parties hereto, that with respect to all loans made by the Association, in accordance with this agreement, the Association shall have the right to administer and service such loans in the same way and manner as other loans made by it, and without limiting in any manner the liability of the Corporation under its guarantee herein, to grant extensions and renewals of any such loans, and, with the consent of the Corporation, to permit sales of security, grant partial releases, substitution of security, and releases of security proceeds.
14. This agreement is a continuing agreement between the parties hereto until its termination, which shall be upon ten days' written notice by either party to the other, and in the event of termination, the respective rights and obligations of the parties shall continue with respect to any guarantee or obligation under this agreement until said guarantee or obligation shall have been fully and completely discharged.
15. This agreement shall only be valid and effective upon approval by the Federal Intermediate Credit Bank of Omaha which approval shall be endorsed hereon and the parties hereto promptly notified thereof, and said agreement shall not be amended or changed without written approval of said bank.

APPENDIX II

I, _____ Address _____ County _____
 submit the following as a true and accurate statement of my financial condition on _____, 19____, which is furnished to
 the _____ PRODUCTION CREDIT ASSOCIATION OF _____ for the purpose of obtaining credit
 to pay for supplies to be purchased from the _____
 Name of Cooperative _____

Title to Real Estate in name of _____ Joint Tenancy _____ Tenants in Common _____
 If tenant, give name and address of landlord _____ Share rent? _____
 No. acres rented _____ Date lease expires _____ Total annual cash rent \$ _____ When due _____

GROWING CROPS AND CROPS TO BE PLANTED

Crops	Acres Total	Yield per Acre	My Share
Hay			
Pasture			

SUPPLIES TO BE FINANCED

	Amount
	\$
Total	\$

ESTIMATED INCOME FOR REPAYMENT

Date	Source	\$
Total		\$

FINANCIAL STATEMENT

ASSETS		LIABILITIES	
Cash on hand	\$	Open accounts, bills etc	\$
U.S. Bonds-Cash Value		Due relatives	
Money or notes due me-(Collectible)		Unsecured notes	
Farm products for sale		Notes secured by chattels	
Cattle		Notes secured by real estate	
Hogs		Delinquent interest	
Sheep		Taxes due	
Farm implements owned		Delinquent cash rent	
Real estate owned _____ acres		Judgments	
Real estate owned _____ acres		Other debts:	
Feed on hand			
Other property:			
Total	\$	Total	\$
		Net Worth	\$

PROCEEDS AND STOCK AGREEMENT

The applicant authorizes the Association to disburse loan proceeds to the above-named cooperative for the account of the undersigned as the "Supplies
 to be Financed" listed above are purchased. Repayments will be made to the _____ office of the Production Credit
 Association. The applicant recognizes that the qualifying shares of Association stock to be transferred to the applicant in connection with this loan (made
 under the "Guaranty Agreement") are to stand in the name and to be the property of the applicant only until the loan is paid in full, or until the stock is
 applied on the debt; and that upon full payment of the loan, the legal and equitable right, title, and interest of the applicant in and to such stock shall
 terminate, and the legal and equitable ownership of such stock, after conversion thereof to Class A stock, shall revert to the supply cooperative which
 made said stock available to the applicant.

APPROVED UNDER "GUARANTY AGREEMENT"

Name of Cooperative _____ \$ _____ Amount _____ Date _____, 19____
 by _____ Date _____ Signature of Applicant _____

PCA EXECUTIVE COMMITTEE ACTION

Amount Approved \$ _____
 Ex. Com. _____
 Initials _____ Date _____, 19____
 Signature of Applicant _____

RETAIL CREDIT AND THE PATRON FINANCE PROGRAM
IN KANSAS COOPERATIVES

by

CARL T. FREDRICKSON

B. S., Kansas State University, 1964

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

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MASTER OF SCIENCE

Department of Agricultural Economics

KANSAS STATE UNIVERSITY
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Credit extension by retail farm supply business has been and continues to be one of the most difficult problems these firms face. Cooperatives have been particularly hard-pressed to control their credit function. The effect has been detrimental to the financial health and overall efficiency of some cooperatives. This is especially true of those associations which have other problems such as low gross margins, lack of working capital, or poor management.

The Patron Finance Program was proposed as a means of reducing the burden of accounts receivable on cooperatives. It is an arrangement between local cooperatives and Production Credit Associations. Participating patrons make purchases from the cooperative. The Production Credit Association is notified and reimburses the cooperative. The amount of the sale is then added to the patron's loan balance by the Production Credit Association. Repayment of all loans is guaranteed by the cooperative.

Since the Patron Finance Program was first offered to Kansas cooperatives in 1960, 54 have signed contracts with Production Credit Associations. The program was utilized by 36 of these cooperatives in 1964. Eleven Production Credit Associations had active contracts, and a total of \$654,101 was loaned to patrons through the program in 1964. This total was 3.4 percent of the total credit sales made by the 36 cooperatives during 1964.

An attempt was made to determine whether greater use of the program contributed to a lessening of the burden of accounts receivable. The nine cooperatives which made the most significant

use of the program in 1964 were compared with the entire group on the basis of two criteria: (1) percent of supply sales in accounts receivable at the end of the business year immediately previous to the adoption of the Patron Finance Program and at the end of the 1964 business year, and (2) percent of working capital in accounts receivable at the ends of the same two periods. Significance of use was measured by the percent of credit sales which went through the program.

The group of 36 cooperatives had 3.4 percent of its sales paid through the Patron Finance Program. Both the percent of sales and percent of working capital in accounts receivable increased from the earlier periods of 1964 for the 36 cooperatives. The nine most significant users of the program had 8.9 percent of their credit sales paid through the Patron Finance Program. This group had smaller percentages of sales and working capital in accounts receivable at the end of 1964 than they did previous to adopting the program. It appeared that greater use of the program was of benefit to these nine cooperatives.

The most important objections to the Patron Finance Program by patrons were the interest charge and the necessity of filling out a balance sheet. Patrons also objected to dealing with an institution other than their local banks. Cooperative managers objected to the stock purchase requirement and the guaranty clause. Some of them felt that the Production Credit Association personnel did not take an active interest in the program. The objections registered most often by Production Credit Association

Managers were that cooperative managers did not understand the Patron Finance Program fully and that, in some cases, they had attempted to shift slow accounts to the program. They also questioned whether the program with its present volume was a profitable operation for their Production Credit Association.